METHOD, PROGRAM, AND TOOL FOR UPDATING
THE NATIONAL LANGUAGE VERSIONS OF DOCUMENTS

BACKGROUND OF THE INVENTION

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Field of the Invention

This invention relates to distributing updated
documents that have changed content, and more specifically
10 to updating the National Language versions of a native
language document that has been changed.

Description of the Related Art

The software market is international in scope. To be
successful in this international marketplace with a software
15 product, a software provider must simultaneously deliver the
software product in many National Language versions. For
example, if a U.S. software manufacturer's software product
is to be globally available, each translated version of the
ReadMe files, User's Guide, and message files should be
20 packaged along with the English (US) version. In many
situations, this is difficult for a software manufacturer to
achieve. The following scenario illustrates how this
difficulty arises.

A U.S. software manufacturer initially creates the
25 software product along with the associated texts, e.g.,
ReadMe files, User's Guide, and message files, in its native

language, e.g., U.S. English. When the product and associated text are completed in English, a copy of the product and/or associated text are sent off to be translated in various different languages within a given deadline.

5   Typically, documents are translated in two phases. The first phase utilizes an automatic translation tool that automatically converts an original source language into a specific translated target language for which the automatic translation tool is designed. The automatic translation

10 tool may utilize tables or other linking means to associate a given word or phrase in a first language with a corresponding translation in a second language. An automatic translation tool may also automatically rearrange the sentence structure as appropriate for a given language.

15 Since languages can not be directly translated on a word by word basis into another language, these automatic translation tools generally provide only a draft quality translation. To achieve a higher quality translation reflecting a more fluent translation, manual translation is

20 often necessary. As such, after a first phase of automatic translation, a second phase of translation is invoked which utilizes manual translation by professional translators. Although the final manual translation produces fluent text in a translated language, the process is time consuming and

25 subject to the schedule of the translator(s).

The problem occurs when the original, native language version needs to be updated for whatever reason. Quite often after the text was sent out for translation, errors are found in the original version. It may still be possible

30 to make corrections to the original native language version

prior to a committed shipping date or release date of the
product. However, it may not be possible to get
translations of the updated text back in time, also.
Consequently, this can either cause delayed shipment of the
5   whole product until the translations are completed, or it
can cause extra effort and time in repackaging the product
without the National Language versions that do not have the
updated translations available. In either case there is at
least some, if not a significant amount of, erosion of
10   customer satisfaction for those customers not receiving the
product with text in their own language.

15   SUMMARY OF THE INVENTION

         It is therefore an object of the invention to
synchronize National Language Versions of a software
product with updates to the original native language version
20   of a software product for simultaneous delivery of the
software product in all languages.

         The method of the present invention overcomes the
problems associated with trying to simultaneously deliver a
25   software product in a variety of different languages,
especially when updates to the translated text are required
in order to reflect any updates or changes that have been
made to the original native language version of the product.

The two phase translation process (automatic
translation in conjunction with manual translation) is
utilized for the initial drop of the documents. The initial
drop is also referred to as the first National Language
5 Version freeze. As such, the first translations of the
product are performed using automatic translation and manual
translation, or by any other means, to achieve a high
quality fluent translation. Once these first translations
are performed on the initial drop of the product, if the
10 product has any other changes or updates to it, the
translations for these changes or updates are handled
initially by using only an automatic translation tool, or
other means, that provides merely a draft quality
translation that has a lower quality than the high quality
15 fluent translation. In addition, the draft quality
translation is provided in a shorter time than the time
required to provide a higher quality translation. That is,
the lower quality translation process has an average
translation time per word (i.e., translation time per number
20 of words being translated) that is less than the average
translation time per word required for the high quality
translation process. When all changes or updates are
translated for each National Language version using
automatic translation tools or other lower quality but
25 quicker translation means, then the National Language
Versions are ready to be simultaneously delivered with the
native language version. Any required manual translation of
any National Language Version (NLV) for these subsequent
changes or updates is performed at a later time and is
30 delivered separate from the initial delivery such as through

the World Wide Web (Web), other Internet means, or through
other types of electronic or physical delivery. As such, a
high quality translation is performed on the freeze level
National Language versions, while only a quicker and lower
5 quality translation methods are used initially on any
updates or changes to any previous version having a high
quality translation.

An indicator is placed in any document that has only
been updated using an automatic translation tool in order to
10 indicate that certain text has only been translated using an
automatic translation tool, and that different text
resulting from a further manual translation will be
available at a later time. This indicator helps explain to
a user why certain language in a document may not be as
15 fluently expressed as a user would normally expect it to be.
This indicator can be inserted automatically by the
automatic translation tool when the automatic translation is
being performed on the updates or changes.

The automatic translation tool, which may be
20 implemented as a software program, has a selectable setting
that allows a user to enable the automatic insertion of the
indicator. The automatic insertion of the indicator is
enabled if only a lower quality translation is being
performed. The indicator is not automatically inserted if
25 the translation being performed is part of a high quality
translation.

The method of the invention, which splits the
translation process into two separate phases and coordinates
the simultaneous delivery of each NLV of a product after the
30 initial first phase, minimizes any potential for a delayed

delivery of a product due to translation time needed to translate updates to the product.

5   BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present invention and the advantages thereof, reference should be made to the following Detailed Description taken in
10 connection with the accompanying drawings in which:

Fig. 1 illustrates the process flow for carrying out a preferred embodiment of the invention;

Fig. 2 illustrates a sample document having different portions of text with different quality levels of
15 translation and an indicator indicating that the lower quality translated versions will be further translated and available at a later date; and

Fig. 3 illustrates an automatic translation tool for inserting various indications within a document to indicate
20 that certain text will be further translated to produce a more fluent translation, and will be available later or after a specified date.

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              DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The following described preferred embodiment of the invention may be utilized for delivering documentation in an
30 original native language and in one or more different

National Languages. The document may be any item that is
capable of being translated. The term document may include,
but is not limited to, books, magazines, individual
articles, conference or research papers, collections of
5 articles or papers, brochures, advertisement, and software
products including user interfaces, manuals, ReadMe files,
User Guides, messages, and Help topics. Although the
preferred embodiment is described with reference to a
software product, the invention is applicable to the
10 delivery of any type of electronic or physical document or
collection of documents.

Fig. 1 illustrates the process flow for delivering a
software product in a native language and in at least one
different National Language. First, a software product,
15 including all of the text associated with the product (e.g.,
user interfaces, messages, ReadMe files, User Guides, etc.),
is created in a native language, 101. Since the creation
process is inherently an iterative process, at some point in
time the software product is frozen at an initial level.
20 This point in time may be determined by the development
level or completeness of the product, or by the time
requirements mandated by a set delivery date and any time
required beforehand for testing and/or for National Language
translations, etc. This freeze level defines the product
25 for which translations in various languages will be made.
This freeze level also defines a given level of the product
from which changes and updates can be made.

It is this freeze level for which initial National
Language translations are made. These translations are made
30 using an automatic translation tool that is specifically

designed for each National Language. An example of an automatic translation tool is Systran Professional Premium, a description of which can be found on the World Wide Web at languagepartners.com/products/mt.htm, which is herein

5 incorporated by reference. Due to the inherent differences between languages, many automatic translation tools are capable of only producing draft quality translations. To achieve a fluent translation for a finished project, a manual translation is then performed to further refine the

10 translation made by the tool. As such, as shown in step 102, the initial freeze version of the product is translated using both automatic and manual translations.

As shown in Fig. 1, step 103 is optional. At this point in time, the product may or may not be delivered. If

15 it is delivered, the native language version of the product is delivered along with the National Language versions that have been automatically and manually translated.

Whether or not this delivery takes place, subsequent steps in the process depend upon whether or not there are

20 any subsequent changes or updates to the product since the freeze of the first initial version, or since a high quality translation has been completed for a previous version, 104. If there are not, the delivery process ends, 105, assuming that the previous delivery, 103, was or will be made before

25 the end, 105. If changes or updates are made, then an automatic translation of the changes or updates to the native language version are made, 106, to create each of the National Language versions. As the automatic translation is being performed, an indicator is inserted in each of the

30 National Language versions to indicate that the translated

text was translated using automatic translation and that a
further (manual) translation of the changed text will be
performed at a later time and delivered later, 107.

5   The product is then delivered, 108, in the native
language with its updates or changes and in each National
Language with the updates or changes being only
automatically translated. The delivered National Language
versions have included within the product the applicable
indicators indicating which portions of the text were only
10   automatically translated. After this delivery, the
automatic translation of the changes or updates are further
translated manually, 109. During the manual translation,
the indicators are removed. Then, the National Language
versions of the product documentation, for which the updates
15   and/or changes have been automatically and manually
translated, are delivered 110.

The process then continues back to step 104 to
determine if there are any changes or updates since a
complete high quality translation has been made of the
20   previous version.

It should be noted, that there are various method and
means that can be used to indicate that certain text within
a document has only been automatically or roughly translated
and that a manual translation or a more fluent translation
25   will be made and/or delivered at a later date. For example,
Fig. 2 illustrates a page from a document 200 having a first
portion of text 201 and a third portion of text 203 that are
high quality translations. The second portion of text 220
represents a lower quality of translation that resulted from
30   a quick translation on any updates or changes to a previous

version of the document that was fluently translated. This
second portion of text 220 may be highlighted, denoted by a
bar 231 in the margin, denoted by a footnote 233 or asterisk
234, bracketed, italicized, etc. Either at a location in
5 close proximity to the automatically translated text, or at
a distant location from the automatically translated text
but referenced or otherwise linked to it (such as by a
footnote), there is a notice 221, 222, that states at least
one of the following in some fashion: i) this portion of the
10 text reflects a draft translation; ii) this portion of the
text will be further translated (or manually translated) at
a later date, where the date may be specifically given; and
iii) an updated document will be delivered (by date) after
the further translation (or manual translation) is complete.
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As such, a National Language Version that reflects
updates or changes after the initial freeze version will
have high quality translated portions of the document that
have correctly translated fluent text such as translations
20 resulting from automatic and manual translations, and lower
quality translated portions of the document along with an
indication that an improved translation will be available at
a later date.

Fig. 3 illustrates an automatic translation tool 300
25 that has a setting 306 that enables the tool to
automatically insert a notice as described above in
conjunction with any translated text generated by the
automatic translation tool. This setting is set to "on" if
only a quick translation is being initially performed on
30 updates or changes. This setting is set to "off" if the

automatic translation will be performed in conjunction with
manual translation to produce a high quality fluent
translation.

The process flow which the tool carries out is
5 described with reference to the functional components of the
tool as shown in Fig. 3. The tool receives as input 301
text to be translated. The text is parsed by parser 302. A
lookup function 303 is used on the parsed text which
utilizes a database 304 of translated words and phrases.
10 The translated words and phrases are then compiled into a
translation by the translator 305. If switch 306 is set to
"on", then the tool automatically marks the translated text,
using indicator means 307, and associates an indication with
the text indicating that the translated text is a lower
15 quality draft translation and that a higher quality
translation will be performed at a later date, as described
above. The resulting text having high quality translated
portions and lower quality translated portions along with
the associated indication, as shown in Fig. 2, are sent as
20 output 308 from the tool. If the switch 306 is set to
"off", then the translator sends the resulting translated
text to output 308 without inserting any indicators. The
translation tool of Fig. 3 is illustrative in nature. More
sophisticated translation tools, such as those involving
25 three stages of analysis – syntactic, semantic, and
pragmatic – can also be modified with the on/off switch in a
similar way for inserting the indicator when desired.

The above described automatic translation tool can be
implemented as a software application program running on a
30 computer system having a processor, memory, and an operating

system along with other devices including input and output
devices. The memory can include both volatile and
nonvolatile memory. The look up table or database of
translated words and phrases are stored in nonvolatile
5 memory.

It is intended that the scope of the invention be
limited not by this detailed description, but rather by the
claims appended hereto.

The above specification, examples and data provide a
10 complete description of the method of the invention and any
program and/or tool used in conjunction with carrying out
the method. Since many embodiments of the invention can be
made without departing from the spirit and scope of the
invention, the invention resides in the claims hereinafter
15 appended.

Having thus described the invention, what we claim as
new and desire to secure by Letters Patent is set forth in
the following claims.